

Appl. No. 10/710,395
Amdt. dated October 28, 2005
Reply to Office action of August 08, 2005

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

- 5 Claim 1(original): A photoresist coating system comprising:
a chemical tank for positioning at least one photoresist
bottle, the photoresist bottle being used for storing photoresist
solution supplied to the photoresist coating system;
a cooling system for chilling the photoresist solution in the
10 photoresist bottle;
a heating system for heating the photoresist solution; and
an automatic photoresist feed system for draining and
delivering the photoresist solution.
- 15 Claim 2(original): The photoresist coating system of claim 1
further comprising at least one sensor for detecting an amount of
the photoresist solution in the photoresist bottle.
- 20 Claim 3(currently amended): The photoresist coating system of
claim 1 further comprising ~~at least one~~ a temperature sensor for
detecting a temperature of the photoresist solution in the
photoresist bottle, and a control circuit electrically connected to
the temperature sensor, the cooling system, and the heating
system for temperature controlling.
- 25 Claim 4(original): The photoresist coating system of claim 1
wherein a temperature of the cooling system is between -5°C
and -20°C .

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Claim 5(original): The photoresist coating system of claim 1 wherein a temperature of the heating system is between 20°C and 25°C.

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Claim 6(original): The photoresist coating system of claim 1 wherein the cooling system comprises a coolant, a water jacket, a water pump, a water tank, or a thermostat.

10 Claim 7(original): The photoresist coating system of claim 1 wherein the heating system comprises at least one heat exchanger.

15 Claim 8(original): The photoresist coating system of claim 1 wherein the automatic photoresist feed system comprises a draining and pushing device for draining the photoresist solution in the photoresist bottle and pushing the photoresist solution to a surface of a substrate through a nozzle by utilizing the principle of draining and pushing.

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Claim 9(original): The photoresist coating system of claim 1 further comprising a bubble trap tank for collecting bubbles in the photoresist solution.

25 Claim 10(original): The photoresist coating system of claim 1 further comprising a waste collecting system for reclaiming the photoresist solution sprayed during spinning coating.

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Claim 11(withdrawn): A method for performing a photolithography process by a photoresist coating system comprising the following steps:

5 providing a plurality of photoresist solutions, each of the photoresist solutions being stored in a photoresist bottle;

chilling the photoresist solutions to a first temperature by a cooling system in the photoresist coating system;

selecting a first photoresist solution among the plurality of photoresist solutions;

10 heating portions of the first photoresist solution to a second temperature by a heating system in the photoresist coating system; and

delivering the heated first photoresist solution by an automatic photoresist feed system.

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Claim 12(withdrawn): The method of claim 11 wherein the step of delivering the heated first photoresist solution by an automatic photoresist feed system further comprises the following steps:

20 utilizing a draining and pushing device to filter the heated first photoresist solution through a photoresist filter; and

dropping the heated first photoresist solution to a surface of a substrate through a nozzle.

25 Claim 13(withdrawn): The method of claim 12 wherein the photoresist bottles for storing the plurality of photoresist bottles are positioned in a chemical tank.

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Claim 14(withdrawn): The method of claim 13 further comprising a step of pumping nitrogen to the inside of the chemical tank.

- 5 Claim 15(withdrawn): The method of claim 11 wherein the first temperature is between -5°C and -20°C .

Claim 16(withdrawn): The method of claim 11 further comprising the following steps before selecting the first
10 photoresist solution among the plurality of photoresist solutions:

- sensing air drained from the photoresist bottle for storing the first photoresist solution and transferring a disable signal to the photoresist coating system;
15 releasing the air drained from the photoresist bottle for storing the first photoresist solution; and
draining the first photoresist solution to the heating system.

- 20 Claim 17(withdrawn): The method of claim 16 wherein the photoresist bottle for storing the first photoresist solution is replaced before releasing the air drained from the photoresist bottle for storing the first photoresist solution.

- 25 Claim 18(withdrawn): The method of claim 16 wherein at least one sensor is utilized to sense the air drained from the photoresist bottle for storing the first photoresist solution, and a bubble trap tank having an exhaust taken charge by a valve is

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utilized to release the air.

Claim 19(withdrawn): The method of claim 16 wherein the
photoresist bottle for storing the first photoresist solution is
5 replaced before draining the first photoresist solution to the
heating system.

Claim 20(withdrawn): The method of claim 11 wherein the
second temperature is between 20°C and 25°C.

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